

## DOCUMENT RESUME

ED 362 354

RC 019 312

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TITLE School to Work Transitions: Lessons about Education and Local Economic Development from the Hagerstown, Maryland Rural Labor Market Area.  
INSTITUTION Maryland Univ., College Park. Inst. for Governmental Service.  
SPONS AGENCY Northeast Regional Center for Rural Development, University Park, PA.  
PUB DATE 92  
NOTE 21p.  
AVAILABLE FROM Institute for Governmental Service, 2101 Woods Hall, University of Maryland, College Park, MD 20742 (free).  
PUB TYPE Reports - Evaluative/Feasibility (142) -- Collected Works - Serials (022)  
JOURNAL CIT Maryland Government Report; v4 n1 Win 1992  
EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.  
DESCRIPTORS \*Economic Development; \*Education Work Relationship; Employer Attitudes; \*Employment Qualifications; High Schools; Job Skills; Public Policy; \*Rural Areas; Rural Development; Rural Education; \*School Business Relationship  
IDENTIFIERS \*Education Economy Relationship; \*Maryland; Pennsylvania; West Virginia

## ABSTRACT

Despite skepticism about the viability of an educational investment strategy for rural development, coordination between education and rural employers may be a key to rural economic growth. Interviews with 101 employers in 6 rural counties surrounding Hagerstown, Maryland, as well as a mail survey (95 of the 101 employers responded), examined employers' attitudes, opinions and behaviors related to their employees, job applicants, hiring and training practices, and relations with schools. The majority of the employers (79 percent) had difficulties in hiring and retaining employees. Most provided employee training; prevalent themes were motivation, teamwork, problem solving, and listening. Employers indicated a relatively low level of satisfaction with high school graduates' qualifications. Large percentages of employers sometimes ask or never ask applicants for high school coursework or grades, although they have significant contact with high schools. Policy suggestions derived from the results include: (1) initiating comprehensive human resource investment plans; (2) encouraging and requesting student credentials; (3) improving part-time experiences during high school; (4) coordinating education and training with schools; (5) establishing apprenticeship programs; (6) increasing human resource management skills; (7) improving coordination among counties and states; (8) providing workplace training for high school teachers; (9) providing seed grants for teachers and administrators; and (10) rewarding educators for contributions to economic development. (KS)

SCHOOL TO WORK TRANSITIONS:  
LESSONS ABOUT EDUCATION AND LOCAL ECONOMIC  
DEVELOPMENT FROM THE HAGERSTOWN, MARYLAND  
RURAL LABOR MARKET AREA

by: Philip Favero, Ph.D.

A Policy Research Series from the  
Institute for Governmental Service  
Volume 4, Number 1 - Winter 1992

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# REPORT

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Volume 4, Number 1

Winter 1992

## School to Work Transitions: Lessons About Education and Local Economic Development from the Hagerstown, Maryland Rural Labor Market Area

By

Philip Favero, Ph.D.

In this issue of the *Maryland Government Report* economist Philip Favero, State Extension Specialist at the Institute, focuses attention on the transition of high school students from school to work. Favero's objective is to provide practical ideas about how to improve that transition. The publication is written for local economic leaders, particularly leaders in Maryland's small towns and rural counties.

Favero acknowledges that in rural communities out-migration often reduces the local economic benefits of investments in education; but he argues that many rural communities in Maryland will likely reap the benefits of such investments. Local leaders, he believes, should consider how education fits into a local strategic plan for economic development.

Next Favero draws on research he and others conducted in a six county rural labor market area surrounding Hagerstown, Maryland to describe the activities and concerns of rural employers. He notes that employers commonly expressed concerns about the skills and abilities of high school graduates but that employers' hiring practices were often inconsistent with those concerns.

Favero concludes with a set of ten policy suggestions. These contain practical ideas for local economic leaders to improve high school to work transitions and to enhance, thereby, their community economies.

Barbara S. Hawk,  
Institute for Governmental Service

### INTRODUCTION<sup>1</sup>

Public policies for economic growth in the 1990's must reflect the influence of global economic competition. Products and producers are increasingly mobile across the globe. Global competition means that economic policy makers at all levels of government must be concerned with how to retain, attract, expand, and promote businesses that employ high wage employees. The key to growth policy success, according to many observers, is to increase investments in human capital, in order to create a well educated, highly skilled work force.

This report provides information to public policy makers in Maryland about the linkage between education and community economic growth. The report focuses particular attention on policies for secondary education by Maryland's rural counties and communities. The first question considered in the report is: "Should investments in education be regarded as a primary means for local economic growth in rural communities?"

### Education and Rural Community Growth

Economic conditions deteriorated in rural America, including some rural Maryland communities, during the 1980's. Stagnating economies put pressures on rural community leaders to find methods to promote economic growth. Proponents of economic productivity, competitiveness, and growth often view added investments in education as a primary policy means. But several authors have recently concluded that because of general economic conditions common to rural communities, the potential contributions of investments in education to rural economic growth are very limited.

Rural communities in Maryland are, however, quite diverse. Such diversity implies that, for some communities, investments in education are an appropriate method to promote local economic growth. Local units of government have economic relationships with and, often, institutional ties to secondary schools. A realistic and necessary approach is to consider how education fits into broader sets of local economic growth strategies that are developed by small municipal and rural county governments.

### **Enhancing the Economic Growth Benefits of Education**

The second question of concern in this report is: "What can be done to enhance the local economic growth benefits of secondary education?" Because linkages between secondary schools and the labor market are weak in the U.S., many communities may find that strengthening network relations between employers and high schools will increase the economic benefits of existing or new educational expenditures. In particular, the signals that are exchanged between employers and students should be examined for possible policy action. The report describes a study of a six county rural labor market surrounding Hagerstown, Maryland and concludes with a set of ideas for municipal and county public policy makers interested in enhancing community economic growth through innovations in secondary education.

### **RURAL ECONOMIC DIFFICULTIES**

During the 1970's many rural American communities experienced an "economic renaissance." In that decade, non-metropolitan areas surprised experts and reversed historic trends by creating jobs that attracted and retained people (Beale, 1988). By several measures, however, the 1980's were much more difficult years for rural economies (Deavers, 1991; Flora and Christenson, 1991).

Rural employment grew relatively slowly during the 1980's. Deavers contrasted rural/urban differences and traced slow growth in rural areas to declines in several key economic sectors. Employment in metropolitan areas rose by nearly 21 percent between 1979 and 1989; in rural areas the increase was only 12 percent. Rural natural resource industries, including both agriculture and mining, saw employment declines. In contrast to the previous decade, rural manufacturing employment also declined.

The gap between rural and urban per capita income increased in the 1980's (Deavers, 1991; see also Deavers and Hoppe, 1991; and Tickamyer and Duncan, 1991.) During the post-WWII era, until the late 1970's, the income gap between rural and urban people had gradually declined. By the end of the 1980's, however, rural per capita income was only 72.2 percent of urban per capita income, about what it had been twenty years earlier (Deavers, 1991).

The 1980's began with dramatic increases in the poverty rate, for both urban and rural areas. Although poverty rates declined somewhat in the latter part of the decade, rural rates declined later than urban rates and remained relatively higher at the decade's end (Deavers, 1991).

During the 1970's, rural unemployment rates had fallen below urban unemployment rates. In the early 1980's, however, the rural unemployment rate rose to 10.1 percent. Since then, the rate has remained above the urban unemployment rate (Deavers, 1991).

Overall, economic conditions in rural America deteriorated significantly during the 1980's, leaving the economic potential of many rural communities and their residents under-utilized and disadvantaged. As a result, rural economic growth has become a pressing, important public policy issue for rural interest groups, public officials, educators and others interested in rural development. One important policy question is: what can education contribute to rural economic growth?

### **EDUCATIONAL INVESTMENTS AND RURAL ECONOMIC GROWTH: THEORY AND SKEPTICISM**

For several decades, economists and economic historians have debated about the contribution of education to economic growth. Blaug (1976, 1985, 1992) summarized and analyzed the debate. Some current issues of contention include: the economic merit of general, academic education versus occupational training (Blaug, 1985 and Bishop, 1989); the argument that while education is correlated with increased worker earnings and productivity, it does not cause those increases (Whitehead, 1981); and, the contributions to economic growth of formal education versus non-formal development of human capabilities (Mitch, 1990).

#### **The Theory and Its Advocates**

Although the issues are not settled and precise measurement is not conclusive, it seems clear that investments in education do contribute to economic growth in several primary ways: by helping people solve production problems; by increasing workers' utilization of machines; and by helping people communicate better (Carnoy, 1977; see also Perkins, 1986). Currently, interest in educational investments as a means to economic growth is high. Critics of the American economy are appealing for additional investments in education to overcome weaknesses. For example, Baumol, *et al.* (1989), Dertouzos, *et al.* (1989), and Reich (1991) all recently argued that maintaining the productive capacity of the U.S., relative to our global industrial competitors, will require increased investments in public education and training.

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*... it seems clear that investments in education do contribute to economic growth ...*

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Since rural areas in the U.S. have lower levels of education than urban areas (McGranahan and Ghelfi, 1991), should investments in education be a high priority means for promoting rural economic growth? Several authors, after analyzing general conditions in rural areas, have expressed cautious and even skeptical views about that idea. Their views and reasons for their skepticism deserve consideration.

### **A Skeptical View Based on Common Rural Conditions**

Three studies, conducted by social scientists in the Economic Research Service, U.S. Department of Agriculture, provide a skeptical view of education for rural economic development. Killian and Parker (1991) found no significant correlation between local educational levels and employment growth across rural areas during the 1970's and 1980's. McGranahan and Ghelfi (1991) argued that the core problem in rural economies was insufficient demand for well educated workers rather than an insufficient supply of such workers. And Teixeira and Mishel (1991) concluded that the demand for highly skilled workers is likely to stagnate and, perhaps, even decline in rural areas during the 1990's.

Skepticism about the viability of an educational investment strategy for rural development is attributable to two human resource characteristics common among rural American economies (Deavers, 1991; Falk and Lyson, 1991). First, low wage, low skill jobs are increasingly concentrated in rural areas. That increasing concentration may be because rural businesses are relatively disconnected from information and technological innovations that are driving global economic growth. Also, the low density of businesses in rural areas may discourage development of specialized producer services that would, in turn, support additional growth. Rural areas are also relatively more dependent than urban areas on blue collar manufacturing, a weak sector of the U.S. economy. Whatever the reasons for the growing concentration of low skill jobs in rural areas, the implication is that better educated persons will be increasingly encouraged to migrate away from rural areas to find jobs commensurate with their education.

A second human resource characteristic common in rural areas, as Deavers (1991) demonstrated, is an education-earnings gap between urban and rural areas, a gap that is increasing. Young rural men earned about 12 percent less than young urban men in 1979. During the 1980's that gap changed only slightly for young men with a high school

education. But for the college educated, by the end of the decade, the earnings advantage for urban young men was greater than 30 percent. The result, again, is an incentive for better educated people to migrate from rural to urban communities.

Should these two common characteristics of rural areas, the concentration of low skill jobs and the education-earnings gap, preclude increasing investments in the education as a means to promote local economic development in rural communities? Must economic policy makers be content that added investments in rural education will, because of out-migration, benefit only individual students and the metropolitan communities to which they move? Not necessarily.

### **A Rationale for the Relevance of Education to Rural Economic Growth**

Rural communities across America, and particularly in Maryland, are quite diverse. They differ, for example, by their level of entrepreneurship, quality and quantity of labor, natural resources, capital assets, business composition, population, and proximity to employment centers. Against the common background of rural economic difficulties during the 1980's, some rural communities, particularly those adjacent to metropolitan areas and those with amenities that attract retirees, did relatively well, and even gained in population; other rural communities, those with large government facilities, also bucked the tide (Beale, 1988).

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*Must economic policy makers be content that added investments in rural education will, because of out-migration, benefit only individual students and the metropolitan communities to which they move?*

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An accounting of the recent job growth experience of Maryland's counties illustrates the diversity of rural experiences. As is shown in Table 1, during the last expansion phase of the national economy (1982-1989) one urban jurisdiction -- Baltimore City -- and three rural counties -- Allegany, Dorchester, and Washington -- increased jobs at a pace slower than the national average. The state of Maryland increased jobs at a very rapid pace, almost twice the national average. Jobs in five rural counties grew at a rate slower than the state average but faster than the national average. They were: Cecil; Garrett; Kent; Somerset; and Wicomico. Two rural counties in Southern Maryland -- Calvert and St. Mary's -- more than doubled their number of jobs, growing at a pace more than four times the national average and almost three times the state average.

**Table 1**  
**Employment Changes During the Last Business Expansion, 1982-89**

| Jurisdiction    | Employment |            | Percent Increase |
|-----------------|------------|------------|------------------|
|                 | 1982       | 1989       |                  |
| Allegany        | 20,366     | 22,649     | 11.2             |
| Anne Arundel    | 86,754     | 136,958    | 57.9             |
| Baltimore       | 225,558    | 299,642    | 32.8             |
| Baltimore City  | 286,307    | 311,406    | 8.8              |
| Calvert         | 4,357      | 9,119      | 109.3            |
| Caroline        | 3,855      | 5,372      | 39.4             |
| Carroll         | 22,345     | 35,020     | 56.7             |
| Cecil           | 11,971     | 16,395     | 37.0             |
| Charles         | 9,232      | 19,596     | 112.3            |
| Dorchester      | 8,708      | 10,291     | 18.2             |
| Frederick       | 29,184     | 46,972     | 61.0             |
| Garrett         | 5,059      | 7,015      | 38.7             |
| Harford         | 23,117     | 38,630     | 67.1             |
| Howard          | 50,311     | 87,370     | 73.7             |
| Kent            | 4,123      | 5,574      | 35.1             |
| Montgomery      | 224,539    | 339,797    | 51.3             |
| Prince George's | 162,629    | 248,639    | 52.9             |
| Queen Anne      | 3,480      | 6,471      | 85.9             |
| St. Mary's      | 7,520      | 15,877     | 111.1            |
| Somerset        | 2,049      | 2,846      | 38.9             |
| Talbot          | 10,409     | 14,615     | 40.4             |
| Washington      | 35,557     | 43,600     | 22.6             |
| Wicomico        | 23,744     | 30,874     | 30.0             |
| Worcester       | 9,495      | 14,984     | 57.8             |
| MD              | 1,270,669  | 1,771,672  | 39.4             |
| US              | 74,297,252 | 91,631,203 | 23.3             |

Source: County Business Patterns, U.S. Census Bureau

The implication of diversity among and within rural communities is that labor market opportunities for better educated people will not be uniform but will vary by local conditions. The presence of well trained workers, particularly in certain skill areas, may also increase the probability that existing employers will stay or expand, that new local employers will emerge, or that branch plants will be attracted. Each of these changes, if it occurs, would increase local incomes, jobs and tax base.

Realistically, however, for many rural communities, additional investments in education will provide benefits to individual students and their families but, because of out-migration, will have little local economic growth impact. Again, however, the consequences of additional educational investments will depend on the particular characteristics of the community. Thus each community should make a clear, hard assessment of its own situation when making decisions about education for economic growth.

## **Building Growth Strategies With Education Components**

Reid (1991) defines strategic planning for rural economic development and offers two broad strategies for rural economic growth, a demand and a supply strategy. Both strategies contain possible roles for education. Reid defines strategic planning as a process. That process involves the following:

"a clearly understood objective, a reasoned plan for achieving it, the ability to mobilize and manage resources in accord with the plan, and an understanding of how actions taken in support of the plan can be expected to interact with the context in which action is taken."

One strategy offered by Reid, the demand side strategy, is to develop effective marketing, the ability to sell in particular to high value markets. According to Reid, marketing involves "analyzing trends in the marketplace, and then designing products, production methods and sales strategies to capitalize on profitable opportunities while they exist." Reid's second strategy, the supply side, involves "building new economic strength," creating a comparative economic advantage in a new industry, product or service.

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*... the consequences of additional educational investments will depend on the the particular characteristics of the community.*

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Educational investments can support both strategies. Municipalities and counties can employ education to encourage entrepreneurship and improved management practices, and to train a work-force that is willing and able to produce. The particular role for education in any strategy would depend on what educational resources are needed to make a specific strategy work. Defining that role will require continuous exchanges of information and coordination of action (networking) among local economic development policy makers, employers, educators, and students.

## **COORDINATION BETWEEN EDUCATION AND THE ECONOMY**

Strengthening such networks may, in fact, be a key means to increasing the economic benefits of *existing* investments in education as well as a method for planning additional investments. Recent research has demonstrated how important the exchange of information and coordination between education and employers is for educational investments to create growth. Research also suggests that networking is weak in the U.S., particularly between high schools and employers. Local economic development policy makers can strengthen such networking.

Research by Hage, *et al.*, (1988) on the French economy demonstrated the importance of closely coupling education with the economy to promote economic growth. The economic pay-off to educational investments, it was found, depended, in significant part, on coordination between educational and employment institutions. In France, unlike the U.S., the coupling between education and employment is accomplished by strong centralized control.

In the U.S., coordination is expected to occur primarily through market relationships guided by wage signals. Some authors, in writing about rural development, have suggested the need for community-level institutions to coordinate education and the economy; their suggestions include Community Action Committees (Sher, 1977) and Work Education Councils (Gudenberg, 1985).

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*Strengthening . . . networks may, in fact, be a key means to increasing the economic benefits of existing investments in education as well as a method for planning additional investments.*

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Rosenbaum, *et al.* (1990) examined the coupling issue by focusing on problems in the high school-to-work transition in the U.S. and other industrialized countries. Rosenbaum, *et al.*, found stronger linkages between secondary education and the economy in some European and Asian countries than is evident in the U.S. In Germany, Japan and the United Kingdom, close ties are based on network relationships characterized by personal contacts among individuals and the institutions they represent. Such relationships include: long-term arrangements between firms and high schools, whereby the schools nominate students to fill job openings (Japan); formal and informal institutions to exchange information and increase incentives for student vocational efforts (Germany); and new institutions patterned after the German model to provide part-time education to unemployed youth (Britain).

Rosenbaum's findings are important for a variety of reasons:

- \* Expected changes in the mix and content of jobs, and on increased global competition will require employers to demand workers with more sophisticated cognitive skills (Teixeira and Swaim, 1991). A key factor in increasing cognitive skills is a good secondary education system, the base for both direct entry into the work force and for college education;
- \* Demographic trends and a decline in the rate of female entrants to the work force, in the United States, will cause growth in the United States labor force to slow over the next decade (Fullerton Jr., 1991). America will become increasingly dependent for new job recruits on

ethnic and racial minority groups -- particularly African-Americans, Asian-Americans and persons of Hispanic descent (Johnston and Packer, 1987). Increasing ethnic and racial diversity in the labor force will raise issues of education, training, and employment opportunities for minorities (Kutscher, 1991). A good high school education for everyone will become increasingly important for us all;

- \* High school dropouts diminish the quality of the labor supply. Dropout rates vary greatly among schools. Rates are relatively high in inner city schools and in rural schools located in poor communities (Hobbs, 1991);
- \* The overall quality of American secondary education is relatively low (Ravitch, 1991). When compared with other industrialized countries, cognitive achievement levels of American students are significantly lower than most of their peers. For example, Japanese students, when graduating from high school, average 4 U.S. grade level equivalents higher in mathematics and science than do American students (Bishop, 1989).

Rosenbaum, *et al.*, speculated that because of the likelihood of close, informal, personal relationships in rural communities, network institutions among secondary educators, employers, students and others may function relatively well in rural American communities. Research about the existence or operation of such institutions in rural communities or elsewhere in the U.S. is, however, thin (Rosenbaum, *et al.*)

### A Study of Schools and the Rural Labor Market Surrounding Hagerstown, Maryland

To learn more about employers' relations with high schools in rural communities and about employers' concerns regarding secondary education, interviews were conducted with employers in a six county rural labor market area, in the Hagerstown, Maryland area, to the west and north of Washington, D.C. The counties in the study area--Frederick and Washington, Maryland; Franklin and Fulton, Pennsylvania; and Berkeley and Morgan, West Virginia--are all rural in the sense that they are much less densely populated than their urban neighbor, Washington, D.C., and the intervening suburban county (Montgomery County, Maryland). County seat communities for the six are located 45 to 104 miles from the District of Columbia boundary.

The purpose of the research was to obtain descriptive information to serve as a base for policy actions. Research was designed to inform community leaders about public and private policy options for strengthening school-employer linkages to promote community economic development. Employers were asked about their attitudes, opinions, and behaviors concerning: their employees; job applicants; hiring and training practices; and relations with schools.

Employers were chosen so as to contact those who were the most likely to have knowledge about the local labor market. This was done by randomly selecting from among those employers who were the largest in the counties or who were in employment sectors that had grown during the 1980's.

In requesting interviews, the person most knowledgeable, on a daily basis, about human resources in the organization was requested. In smaller organizations, this person tended to be the owner or chief executive. In larger organizations, the plant manager or personnel director was usually interviewed. A request for an interview was rejected only once. Using this procedure, interviews were conducted with 101 employers in the six county area.

An instrument was designed, reviewed by peers and pilot-tested in one of the six counties. The final version contained 45 questions. Interviews lasted about one hour each.

After completing the interviews, additional data were obtained through a mail survey directed to the persons previously interviewed. This second instrument contained six questions about subjects not previously covered in the interviews. Ninety five of the 101 individuals who had been interviewed completed the survey. The number of interviews and surveys returned was almost equally distributed across the six counties.

### CHARACTERISTICS OF EMPLOYERS' ORGANIZATIONS

Employers' representatives were asked how many full-time, permanent employees they had on their payrolls on an average day during the month prior to the interview. Their answers indicated the median number of such employees, per organization, was 95. Three years prior to the interview, the median had been 84.

Five of the organizations were public and 96 were private. About half of the organizations were engaged in manufacturing, and the other half in the provision of services.

Of the 101 private and public organizations represented in the interviews, 54 were locally owned (all private firms) and 47 were a division or branch of a larger organization (either private or public). Branch organizations were of three types: headquartered within the state where the interview took place (6); headquartered elsewhere in the U.S. (37); and headquartered in another country (4).

### RESULTS SUGGESTING POLICY ACTIONS

The interviews and mail survey resulted in several findings that suggested policy actions by area employers for secondary vocational education. Six salient findings are discussed in this section.

**Table 2**  
**Coping Methods for Difficulties in Hiring/Retaining Employees**

| Methods                | Level of Importance |       |             |      |        |
|------------------------|---------------------|-------|-------------|------|--------|
|                        | Very Great          | Great | Quite a Bit | Some | Little |
| Expand Empl Training   | 34                  | 17    | 7           | 10   | 11     |
| Provide Career Advance | 23                  | 8     | 8           | 10   | 16     |
| Raise Wage Offers      | 19                  | 18    | 13          | 10   | 19     |
| Increase Overtime      | 13                  | 10    | 4           | 14   | 36     |
| Apprenticeships        | 12                  | 10    | 7           | 5    | 44     |
| Redesign Jobs          | 6                   | 10    | 17          | 13   | 32     |
| Delay Plan Expansion   | 6                   | 5     | 2           | 5    | 59     |

### Difficulties in Hiring and Retaining Employees

Seventy-nine employers reported having had difficulties during the prior three years in hiring or keeping qualified people for employment. For 12 of the employers, those difficulties resulted in the postponement of innovations such as new or expanded services or product lines or new processes, materials or machinery.

The employers responded to these difficulties with various coping methods. As Table 2 reveals, employers considered the expansion of employee training as their most important coping method, followed by providing career advancement opportunities to employees and raising wage offers. Employee training seems a "two-edged sword;" apparently, such training helps keep qualified people by offering them career advancement opportunities even though it may also provide them with marketable skills for alternative employment.

### Training Practices

Responses by employers to the mail survey (95 responses) indicated that 71 employers offered formal training for their employees. Fifty-five employers indicated they trained managers, 51 trained unskilled workers, 43 trained technicians, and 29 trained other workers. Fifteen employers volunteered the fact that they trained *all* workers. That most employers in the study reported the provision of formal employee training was not surprising; national estimates are that employers spend about \$30 billion per year on formal employee training (Carnevale and Gainer, 1989).

Employers self-reported they were teaching many

subjects, as is illustrated in Table 3. "Teamwork" and "motivation" were the subjects most frequently taught, followed closely by "problem solving" and "listening to others." Twenty-five employers volunteered the fact that they taught job specific skills, 8 taught about "how to deal with the public," and 7 taught computer skills.

In general, employers taught non academic skills needed for individual and group efforts in an organization. As Table 3 reveals, however, many employers also taught basic academic skills, particularly science. The mix of skills taught by employers in the study match closely with a mix of skills identified as "skills most wanted by employers" across the U.S. (Carnevale, Gainer and Meltzer, 1988.)

### Level of Satisfaction with Qualifications of Job Applicants

Respondents were asked to consider the educational credentials of people who had applied for jobs during the past year and where the applicants had been educated. Among the employers who had received job applications from people educated in the six county labor market area: 92 had considered local high school graduates; 64 had considered local vocational/technical school graduates; 54 had considered local junior or community college graduates; and 57 had considered local four-year college graduates.

Respondents were then asked to report how satisfied they were with the qualifications of those applicants who had completed their studies at educational institutions located in the six county labor market area. Table 4 reveals the level of employer satisfaction with job applicants, grouped by the applicants' educational credentials.

**Table 3**  
**Subjects Being Taught By Employers**

| Subjects                  | Percent of Employers Who Train |
|---------------------------|--------------------------------|
| Motivation                | 74                             |
| Teamwork                  | 74                             |
| Problem Solving           | 71                             |
| Listening to Others       | 70                             |
| Leadership                | 68                             |
| Getting Along with Others | 59                             |
| Self Esteem               | 50                             |
| Creative Thinking         | 46                             |
| Basic Science             | 43                             |
| Writing Skills            | 18                             |
| Basic Math                | 17                             |
| Basic English             | 15                             |

**Table 4**  
**Level of Satisfaction with Qualifications of Job Applicants**

| Education                  | Satisfaction Level* |           |                    |               |
|----------------------------|---------------------|-----------|--------------------|---------------|
|                            | Highly Satisfied    | Satisfied | Somewhat Satisfied | Not Satisfied |
| High School<br>(N=92)      | 12.6                | 39.1      | 26.4               | 21.8          |
| Votech<br>(N=64)           | 35.0                | 36.7      | 20.0               | 8.3           |
| Jr/Comm Colleges<br>(N=54) | 40.8                | 49.0      | 6.1                | 4.1           |
| 4 Year Colleges<br>(N=57)  | 57.7                | 32.7      | 1.9                | 7.7           |

\*Percent of Responses

The employers' answers indicated a relatively low level of satisfaction with high school graduates' qualifications but increasing levels of satisfaction as educational levels increased. More than 21% of the employers were "Not Satisfied" with high school graduates' qualifications, and another 26% were "Somewhat Satisfied." Less than 10% of employers were "Not Satisfied" with graduates of vocational-technical schools, junior/community colleges or four-year colleges. The results reflect the respondents' attitudes about both the skills and abilities of the applicants and job requirements of their organizations. They also reflected the *total* educational background of job applicants, including learning that has occurred through formal education, but also learning that resulted from family education, and personal study and experience.

*The employers' answers indicated a relatively low level of satisfaction with high school graduates' qualifications but increasing levels of satisfaction as educational levels increased.*

### Importance and Adequacy of Skills

To probe deeper into the issue of applicants' and workers' skills, a series of questions were asked. Employers were requested first to identify how *important* they regarded a list of skills, abilities, and areas of knowledge among workers they employed. Second, they were asked to judge how *adequate* those skills, abilities, and areas of knowledge

**Table 5**  
**Importance of Skills and Adequacy of Applicants' Qualifications**

| Skill, Ability or Worker Quality | Importance and Adequacy Combinations |                    |                        |                      |
|----------------------------------|--------------------------------------|--------------------|------------------------|----------------------|
|                                  | Important Inadequate                 | Important Adequate | Unimportant Inadequate | Unimportant Adequate |
| Motivation                       | 63.6                                 | 30.3               | 3.0                    | 3.0                  |
| Listening Skills                 | 59.8                                 | 32.6               | 5.4                    | 2.2                  |
| Self Esteem                      | 51.0                                 | 34.7               | 5.1                    | 9.2                  |
| Problem Solving                  | 48.4                                 | 29.0               | 12.9                   | 9.7                  |
| Creative Thinking                | 47.3                                 | 20.9               | 18.7                   | 13.2                 |
| Teamwork Skills                  | 45.3                                 | 46.3               | 3.2                    | 5.3                  |
| Basic Math                       | 40.2                                 | 31.5               | 18.5                   | 9.8                  |
| Basic Reading                    | 39.2                                 | 38.1               | 10.3                   | 12.4                 |
| Getting Along with Others        | 39.0                                 | 55.0               | 1.0                    | 5.0                  |
| Ability to Learn New Skills      | 38.4                                 | 50.5               | 5.1                    | 6.1                  |
| Leadership                       | 36.7                                 | 18.9               | 31.1                   | 13.3                 |
| Basic Speaking                   | 32.7                                 | 29.1               | 25.5                   | 12.7                 |
| Career Development               | 31.9                                 | 23.1               | 31.9                   | 13.2                 |
| Basic Writing                    | 26.4                                 | 26.4               | 28.6                   | 18.7                 |
| Basic Scienc                     | 12.6                                 | 12.6               | 31.0                   | 43.7                 |

\*Percent of Responses

**Table 6**  
**Kinds of Information Employers Obtain During Job Hiring Interviews with Youth\***

| Kind of Information    | 100%<br>of the time | <100%<br>but >50%<br>of the time | Sometimes<br>but not >50%<br>of the time | Never |
|------------------------|---------------------|----------------------------------|------------------------------------------|-------|
| Previous               |                     |                                  |                                          |       |
| Work Experience        | 91.4                | 7.5                              | 1.1                                      | 0.0   |
| His/Her Age            | 54.4                | 11.1                             | 13.3                                     | 21.1  |
| Comments from          |                     |                                  |                                          |       |
| Previous Employers     | 44.0                | 36.3                             | 16.5                                     | 3.3   |
| High School Coursework | 24.4                | 23.3                             | 27.8                                     | 24.4  |
| Computer Skills        | 17.8                | 27.8                             | 43.3                                     | 11.1  |
| High School Grades     | 13.3                | 16.7                             | 43.3                                     | 26.7  |
| Comments from High     |                     |                                  |                                          |       |
| School Teachers        | 9.4                 | 25.9                             | 38.8                                     | 25.9  |

\*Percent of Answers

were among locally educated job applicants whose qualifications they had reviewed during the previous three years. Answers to those questions are summarized in Table 5.

In the critical category of "Important and Inadequate" the respondents expressed highest concerns, in descending order, about: motivation; listening skills; problem solving; creative thinking; and teamwork skills. Academic skills like basic writing and particularly, basic science were viewed as somewhat less important or less inadequate. Basic mathematics and reading were in the middle range. The low score for basic science is surprising, since the employers previously identified it as a subject often offered for employee training. Again, the respondents' views about adequacy of preparation among job applicants provides a judgement about applicants' total education background, both in and out of school.

### Hiring Procedures

Employers ask questions to obtain information from people who apply for work. The questions are based on how much value employers attach to different kinds of information, on the costs of obtaining the information and

on how accurate employers expect the information will be. The questions asked during the hiring process serve, however, not only to screen applicants but also to send a signal to students and educators about what kinds of information employers are requesting.

In the mail survey, employers were asked to indicate how often they would try to obtain 7 different kinds of information when they were considering hiring someone aged 16 to 24 years. Included as possibilities were various kinds of information about academic credentials--high school course-work and grades and comments from high school teachers. Employers' answers are summarized in Table 6.

The table shows, most importantly, how often employers never ask for information about young peoples' high school course work or grades or comments from high school teachers. Approximately a quarter of the employers never ask for such academic credentials and another 40%, approximately, ask for such credentials less than 50% of the time.

Employers may not ask for this kind of information because they believe it is not valuable, because they believe it is information not easily obtained with accuracy, or

**Table 7**  
**Numbers of Contacts with Educational Institutions\***

| Contacts            | Educational Institutions |                |                  |                    |
|---------------------|--------------------------|----------------|------------------|--------------------|
|                     | High Schools             | VoTech Schools | Jr/Comm Colleges | Four Year Colleges |
| NoContact           | 38.4                     | 45.0           | 60.0             | 64.0               |
| A Few Times a Year  | 32.3                     | 39.0           | 23.0             | 23.0               |
| About Once aMonth   | 22.2                     | 10.0           | 13.0             | 8.0                |
| Once a Week or More | 7.1                      | 6.0            | 4.0              | 5.0                |
| Totals              | 100.0                    | 100.0          | 100.0            | 100.0              |

\*Percent of Responses

because they believe job applicants should themselves initiate the subject. In any case, by not asking for information about high school course work, grades or comments from teachers, employers send a signal to high school students and reduce the motivation of students to take meaningful courses, earn good grades and positively impress their teachers.

*... by not asking for information about high school course work, grades or comments from teachers, employers send a signal to high school students and reduce the motivation of students to take meaningful courses, earn good grades and positively impress their teachers.*

### Contacts with Educational Institutions

Within the study region, all six counties have high schools. Frederick and Washington have Community/Junior Colleges; five counties have vocational-technical schools (and the sixth, Morgan, is served by the technical school in Berkeley). There are also, in Franklin County, a private four-year college (Wilson College), a state four-year college (Shippensburg State) and a branch campus of The Pennsylvania State University at Mount Alto. Washington County has extension courses offered by Frostburg State University.

In order to learn about employers' relations with

educational institutions, a series of questions was asked. Employers reported, first, on the number of contacts they have with educational institutions. These numbers are summarized in Table 7. The numbers indicate that contacts with high schools were most frequent, followed by contacts with vocational-technical schools. Almost a third of the employers indicated that they had contacts with high schools at least once a month.

Almost all the meetings with local educational institutions, the employers stated, were through key individual contacts as opposed to group meetings. Almost all employers characterized their communications with people in educational institutions as very open and only rarely guarded.

Thirty-three of the employer organizations had entered into one or more agreements with educational institutions in the area. Eighteen had agreements with high schools, 4 with vocational/technical schools, 8 with junior/community colleges and 6 with four-year colleges. In total, 36 agreements had been concluded with the four different types or educational institutions. Twelve of the 36 agreements were written contracts; the remainder were verbal.

Employers also stated their interest, if any, in a variety of linkages with educational institutions. A summary of their interests is contained in Table 8. The overall impression created by employers' answers is that a high level of interest exists for more network linkages with schools, even when the linkage could involve a major employer commitment or expense.

**Table 8**  
**Employers' Interests in Linkages With Schools\***

| Kind of Linkage                                | Interested | Not Interested |
|------------------------------------------------|------------|----------------|
| Participate in Job Fairs or Career Days        | 73         | 28             |
| Provide Speakers for School Programs           | 66         | 35             |
| Offer Job Training                             | 65         | 36             |
| Help Develop Curricula                         | 61         | 40             |
| Offer Student Internships                      | 61         | 40             |
| Give Work Place Tours                          | 59         | 42             |
| Sponsor Achievement Awards                     | 56         | 45             |
| Participate on a Committee to Promote Linkages | 55         | 46             |
| Train Teachers                                 | 36         | 65             |
| Contribute Private Equipment to Schools        | 34         | 67             |
| Provide Work Release for Employee Assistance   | 31         | 70             |
| Provide Master Craft Teachers                  | 21         | 80             |

\*Percent

## DISCUSSION AND POLICY IDEAS

Results of the study and relevant findings in the literature have several implications for policy options available to economic development leaders in Maryland's small municipalities and rural counties. Here are ten policy suggestions for ways to improve coordination between education and the local economy:

### 1. Initiate Comprehensive Human Resource Investment Plans

Most employers who were interviewed have had difficulty in hiring and keeping qualified workers, and for many, those difficulties have inhibited innovations in products and production methods. Most also indicated a willingness to help promote linkages between employers and schools. Rural communities could take advantage of this interest by developing a comprehensive human resource investment plan. Franklin County, through a group called the Punt Commission, has already done so (The Punt

Commission on Business-Educational Partnerships, 1990).<sup>2</sup> A comprehensive resource plan might include a variety of intended actions, including the other policy suggestions in this list.

Conversations with employers, educators and community leaders in the more rural of the six counties, Fulton and Morgan, suggest the challenges to developing comprehensive plans there are very different than are the challenges to developing plans in the more urban counties, like Frederick and Washington. In the more rural counties, initiating the process of developing plans must overcome: a scarcity of community planning experience and skills; an ideology of strong individualism that distrusts community planning; and a sense of fatalism brought about by many years of rural out-migration. Even in those counties and particularly among employers, however, new community policies to enhance and retain local human resources are demanded.

In the more urban of the six counties, complications exist

because many groups and organizations are already involved, or believe they should be involved, in local human resource issues. In Washington County, the challenge of such complications is being addressed by the formation of a new umbrella organization called the "Education Coalition." The coalition, formed in 1990 and chaired by the Superintendent of Schools, is in the process of considering membership from various educational, employers' economic development, and parents' groups in the county. The goal of the coalition is to coordinate and concentrate efforts about human resource issues, including the transition from high school to work or to post-secondary education.

## 2. Encourage and Request Student Credentials

Employers indicated in the research, that during job interviews with youth they often do not ask for information about applicants' course work and grades nor do they ask often for comments from high school teachers. Whatever the reason for these interview procedures, employers' behavior sends a signal to high school students, reducing the students' motivation to take academically demanding courses, earn good grades and positively impress their teachers.

To overcome this problem, rural communities could bring educators and employers together to develop a requirement that every high school student create a portfolio of credentials prior to graduation. The portfolio would include a personal resume, easily understood transcript, record of attendance, and certificates of honor and accomplishment. Employers, for their part, would need to agree always to ask young people for the portfolio during job interviews. Asking for the portfolios would send a motivating signal to students.

One of the six study counties, Frederick, has initiated a portfolio program. The project was designed by the "EBI Connection," a partnership of Education with Business and Industry, sponsored by the Frederick County Public School System and the Chamber of Commerce of Frederick County. The portfolio began with 1991 graduates. The development of the portfolio program shows promise and the coordination of employers and educators is commendable.

## 3. Improve Part-Time Experiences During High School

The transition from school-to-work begins for increasing numbers of young people when, as high school students, they obtain part-time work. A large and growing body of literature exists on part-time work during high school. (See, for example: Steinberg and Dornbusch, 1991; and Policy Information Center, 1990.) Highlights of that research include the following:

- \* Large numbers of high school students work. For example, more than two-thirds of all 12th graders in the U.S. work;

- \* Many students work long hours. About 1 in 6 11th graders work more than 20 hours per week;
- \* Student work experience is positively associated with employment and earnings immediately after high school graduation, for youth who enter the labor market;
- \* Working during high school engenders more knowledge of work norms and desirable work habits;
- \* However, long work hours (20 or more hours per week), are associated with a large number of negative measures, including lower school performance, psychological stress, drug and alcohol use, delinquency and autonomy from parents.
- \* Students undertake the decision about part-time work largely on their own. What seems most commonly lacking is a constructive dialogue among educators, employers, students, and their parents: to consider the benefits and costs of part-time employment during high school for individual students; to assess how many hours is too many; to discuss how to make part-time work part of a career planning process; and to teach students how to manage their increased income and freedom when they obtain part-time employment.

Rural community leaders could bring together employers, particularly employers of high school youth, educators, students and their parents in planning meetings about part-time work at the community level. Ideally, those meetings would lead to increased vocational counseling for students considering part-time work and to agreements among educators, families and employers to make part-time work a good experience for young people, one that complements academic achievement and prepares them well for entering the full-time job market. Employers could personally assist young part-time workers by becoming mentors for their young employees.

The meetings might also establish incentives for students to invest in their high school education. One major employer of part-time high school students in the study area, for example, has indicated to a school superintendent his support for a "certificate of employability" based on criteria such as grades and attendance. The employer would be willing to reward any employee who is a high school student and who qualified for the certificate with a \$.25/hour increase in that student's rate of pay. This kind of incentive could significantly influence secondary student behavior in rural communities where job opportunities for youth tend to be limited.

## 4. Coordinate Education/Training

The study revealed most employers in the area are actively engaged in training employees and use employee training as the most important of their coping methods for shortages in qualified workers. The study implies that a fall-off in the supply of new entrants to the labor market will result, other thing equal, in even more employee training.

The division of labor for education/training by schools and employers, however, is not necessarily clear-cut. A natural division, it would seem, would have schools teaching basic skills that are useful in many ways and settings and employers teaching company specific job skills. But consider the following competencies and skills identified by the U.S. Department of Labor (1991) as "needed for solid job performance" in our modern economy. Most fall into a grey zone; they can and should be taught by schools, parents, employers and others:

- \* Resources -- how to allocate time, money, materials, space and staff;
- \* Interpersonal Skills -- how to work on teams, teach others, serve customers, lead, negotiate, and work well with people from culturally diverse backgrounds;
- \* Information -- how to acquire and evaluate data, organize and maintain files, interpret and communicate and use computers to process information;
- \* Systems -- how to understand social, organizational and technological systems; how to monitor and correct performance and design and improve systems;
- \* Technology -- how to select equipment and tools, apply technology to specific tasks and maintain and troubleshoot technologies;
- \* Basic Skills -- how to read, write, do arithmetic and mathematics, speak and listen;
- \* Thinking Skills -- how to think creatively, make decisions, solve problems, see things in the mind's eye, know how to learn and reason;
- \* Personal Qualities -- how to shoulder individual responsibility; how to achieve self esteem, sociability, self management and integrity.

Our study revealed a high level of dissatisfaction with the qualifications of youth leaving high schools in the six county area but a strong willingness by employers to contribute to school resources. Rural community leaders, employers, and educators could engage in a planning process to consider what is appropriately taught in schools, what in the work place, what in families and what elsewhere in the community. At a basic level their dialogue would be about curriculum. But other related questions could include possibilities for teacher education, the provision of master teachers by employers and improved cooperative study programs.

### 5. Establish Apprenticeship Programs

As a further step in coordinating education and training, based upon results in other industrialized countries, apprenticeships should be established (Hamilton, 1990). The elements of apprenticeship, according to Hamilton, are: linkages between work experience and academic learning; utilization of work place and other community settings as learning environments; and close relationships between

young workers and adult mentors. Apprenticeship designs that create employment opportunities for high school graduates and that articulate from high school to community/junior college to four year college would be the ideal. Apprenticeships could be established either by strengthening cooperative education programs or be creating all new apprenticeship programs.

### 6. Increase Human Resource Management Skills

Our study revealed strong employer concerns about the quality and quantity of labor force supply. These concerns imply that employers would be interested in up-to-date information about demographic and educational trends as they will affect labor supply.

Employers who were interviewed are also facing increased competitive pressures. For those employers who produce goods that flow in international markets, there is increased global pressure in their product markets. For all the employers, because they are being integrated into the Washington Metropolitan labor market, there is increased competitive pressure in labor supply. A recent study on industrial technologies and work force organization to meet global competition puts prime emphasis on increasing the knowledge, skills and practices of business owners and managers (Dertouzos, *et al*, 1989). Likewise, employers in rural communities that are being integrated into an urban labor market will be pressured to increase their abilities to effectively recruit, motivate and enhance creativity among new employees. Organizations that serve employers' educational needs in the six counties could include in their programs: information and training about demographic trends; coordination of education and training with schools; and best management practices in human resource management.

### 7. Improve Coordination Among Counties and States

Commuting patterns among Berkeley, Franklin, Fulton, Morgan and Washington Counties show these five counties constitute a labor market area.<sup>3</sup> The five are also, along with Frederick, increasingly tied to the Washington, D.C. metropolitan labor market area.

Labor market integration among the six counties implies a high level of interdependence among employers, students and educators across the whole area. Increasingly, investments in education and training by public schools and employers will create benefits area-wide. Reductions of such investments will, conversely, hurt the area. Information exchange opportunities across county and especially state boundaries seem rare. Labor market integration suggests, however, the increasing importance of such dialogues.

Public forums and meetings are needed to promote information exchange and, when possible, joint policies and programs for mutual benefits across the six counties. An example of this kind of effort is the Quad-States Legislative Conference, which held its seventh annual meeting in Hagerstown in August of 1992. At that meeting, particular attention was paid to human resource and labor market issues in the Cumberland Valley region of counties in Maryland, Pennsylvania, Virginia, and West Virginia.

Meetings like the Quad-States conference can provide opportunities for information exchanges on innovative educational policies and methods to improve educator-employer-family coordination. Resulting joint policies and programs could include, for example, articulation agreements among educational institutions and multi-county student portfolio programs.

### **8. Provide Work-Place Training for High School Teachers**

In comparison with schools in other industrialized countries, American high schools are relatively isolated from contacts with the communities in which they are located (Rosenbaum, *et al*, 1990). One relationship that is underdeveloped in the United States is that between high school teachers and employers. Much might be gained by strengthening communications and trust between teachers and employers. Rural communities, which apparently enjoy relatively close relations between schools and communities, could take the lead in actions for: teachers to increase their understanding of competencies and skills needed by new employees; and employers to increase their confidence in teachers and the students they recommend for employment. To strengthen relations with teachers, employers could hire high school teachers during summer breaks and place the teachers in positions to learn about employers' organizations. Not only would this practice strengthen relations between teachers and employers, it would also enhance the attractiveness of the teaching profession.

### **9. Provide Seed Grants for Teachers and Administrators**

Another way of strengthening relations between employers and educators would be for employers to provide funds for seed grants to local teachers and administrators. Such grants could be used to provide incentives for innovative programs to strengthen vocational education. Innovative programs might include, for example, new ways to: integrate academic and vocational course content; strengthen cooperative learning; develop "tech-prep" programs that link high school and post-secondary education; and to create apprenticeships. Such grants would reward and replicate examples of educational creativity. Also, the grants would also enhance the status of educators in the community.

### **10. Reward Educators for Contributions to Economic Development**

As a way to recognize the many ways in which human resources contribute to local economic development, rural communities could establish public rewards for high school teachers, students, counselors and administrators. Worthy recipients could include, for example: a teacher whose students consistently demonstrate high levels of competencies and skills to local employers; a graduating student with an outstanding portfolio; a counselor who provides exemplary career advice and assistance to students; and an administrator whose leadership significantly improves opportunities for non college bound students. Rewards would encourage behavior that benefits the whole community and would strengthen the network among students, educators, employers and citizens.

### **CONCLUSION**

Pressures on governments to promote economic growth and to provide opportunities for youth will continue to cast attention on the relationship between education and the economy. Although education reform is on the agendas of governments at all levels, local governments will bear prime responsibility for strengthening the networks between schools and communities. Better coordination between education and the labor market promises several benefits -- a smoother transition from school to work by those students who do not obtain a college degree, more satisfied employers, and greater economic growth.

This study of the six county rural labor market surrounding Hagerstown, Maryland offers insights about the need for strengthening coordination among educators, employers, and students. It also offers encouragement that networks of relations can be built and that local models of innovations already exist.

The research revealed employers' concerns about the qualifications of young job applicants, employers' willingness to improve coordination with schools, and some unintended signals from employers to students. Improved coordination is a policy option that is easy to endorse but difficult to implement because it requires a process of bringing people together, discussing relationships, setting a common agenda and changing behavior. This issue of the Maryland Government Report should support the positions that: (1) coordination between schools and employers is an important policy concern, even for rural communities; (2) each community is unique and should consider how education fits into community economic growth strategies; and (3) local innovations in coordination exist, most notably in Franklin and Frederick Counties, and are worthy of replication in additional communities.

## ENDNOTES

1. Funding for this study was provided, in part, by the Northeast Regional Center for Rural Development and by the Office of School-University Relations, University of Maryland at College Park. Project assistance was provided by Margaret Trader, Washington County, Maryland Board of Education; Maria Santa Barbara and Scott McKearney — Sociology Department Graduate Students from the University of Maryland at College Park; Carrie Slaughter, formerly West Virginia Cooperative Extension Agent in Berkeley County; Michael Sowell, Regional Extension Specialist, University of Maryland System; the late Marshall Spayd, a Pennsylvania State University Extension Agent; and several county Extension Directors: Charles Williams, Morgan County, West Virginia; Don Fowler, Fulton County, Pennsylvania; and John Shearer, Franklin County, Pennsylvania.

2. The scope and detail of the Punt Commission Report are broader than high school to work linkages. The Commission considered human resource development beginning among pre-school children and extending through the colleges located in Franklin County. In its report, the commission makes ten major recommendations and suggests forty six methods for implementing those recommendations.

3. The Economic Research Service, USDA, designated the five a "Rural Labor Market Area" after the 1980 Census.

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